



Algal Biology Program at Los Alamos gets a star

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LOS ALAMOS, New Mexico, October 11, 2011—Richard Sayre, one of the nation's top specialists in algae and energy-producing plant research, has joined the Bioscience Division of Los Alamos National Laboratory to help boost cutting-edge research in this area. Cited by Nature magazine as "one of five crop researchers who could change the world," Sayre brings a crew of postdoctoral researchers and a range of funding to LANL. "Bringing Dick to the Laboratory is a great success, as we look to strategic hires to strengthen key capabilities," said Alan Bishop, principal associate director for Science, Technology, and Engineering at LANL. "Dick's enthusiasm and internationally recognized expertise will catalyze many new collaborations in bioscience and other fields to meet our energy security mission." Sayre, who started at the Laboratory the first week of October, is a leading scientist, innovator, and entrepreneur who comes to Los Alamos from Donald Danforth Plant Science Center in St. Louis, where he was the director of the Enterprise Rent-A-Car Institute for Renewable Fuels and the director of the BioCassava Plus program. He is also the chief technology officer for Phycal Inc.,

a start-up biotechnology company in Highland Heights, Ohio, developing microalgal-based biofuel production systems. Sayre was formerly Chair of the Department of Plant Cellular and Molecular Biology at Ohio State University. He was a Fulbright Scholar at the University of São Paulo, Brazil in 2007. Sayre received his doctorate from the University of Iowa and did post-doctoral work at Harvard University. The scientist will be working under a joint appointment at LANL, sharing a quarter of his time with the New Mexico Consortium (NMC). NMC will be constructing a new building and greenhouse in town to accommodate some of the research activity, with help from Los Alamos County. The consortium is a nonprofit corporation formed by the three New Mexico universities under a teaming agreement with the University of California to partner with Los Alamos National Laboratory to advance scientific research and education in New Mexico. "This LANL and New Mexico Consortium strategic partnership allows us to bring in partners and programs we could not otherwise put together," said José Olivares, LANL Biofuels program manager. "Dick's accomplishments as an entrepreneur and scientist will advance our capabilities in this area, helping us develop a new vision for bioenergy and plant science." Along with as many as nine postdoctoral assistants, Sayre and other Los Alamos scientists will explore such projects as the improved efficiency of plant photosynthesis, advances in algae production and harvesting, and understanding the biochemical and biophysical processes of algae and other energy plants. Along with as many as nine postdoctoral assistants, Sayre and other Los Alamos scientists will explore such projects as the improved efficiency of plant photosynthesis, advances in algae production and harvesting, and understanding the biochemical and biophysical processes of algae and other energy plants. Algae science, whether for biofuel production or other applications, has been a growing field for the Laboratory, with advances made recently in such areas as ultrasonic harvesting, persuading algae to grow in "produced water" from oil and gas wells, and even genetically modifying magnetic algae that could be more efficiently harvested. The Bioenergy and Environmental Science Group, in which Sayre will work, focuses on discovering the molecular principles that underpin biological diversity, specificity, response, and function. This effort includes research in environmental microbiology, microbial genomics, metabolomics, systematics and phylogeny and can be applied to the advancement of bioenergy technologies and bioremediation as well as to our understanding of carbon cycling.

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